National Ambient Air Quality Standards for Particulate Matter; Proposed Rule

&

40 CFR Parts 53 and 58

Revisions to Ambient Air Monitoring Regulations; Proposed Rule

January 17, 2006

Comments due April 17, 2006

Overview

• On December 20, 2005, EPA proposed revisions to the National Ambient Air Quality Standards (NAAQS) for particle pollution.

• The proposed revisions would strengthen a fine particle standard important for both health and visibility, and would improve and refocus the coarse particle standards on those particles that are associated with public health concerns.

• The proposed revisions address two categories of particle pollution:

– *fine particles* (PM2.5), which are 2.5 micrometers in diameter and smaller; and

– *inhalable coarse particles* (PM10-2.5), which are smaller than 10 micrometers in diameter but larger than PM2.5.

• Simultaneously, EPA proposed amendments to its national air quality monitoring requirements, including those for monitoring particle pollution. The proposed changes include the design of a network to monitor PM10-2.5.

• For more information on both proposals and the RIA:

– http://www.epa.gov/air/particles/actions.html

PM2.5 – Primary 24-hour Standard

• Under the proposal, EPA would revise the level of the **24-hour standard** from the current level of ***65 µg/m3*** to ***35 µg/m3***.

– EPA is proposing this change based on its assessment of a significantly expanded body of scientific information.

• Studies show health effects at and below the level of the current standard.

• EPA also is considering alternative levels for the 24-hour standard, between the range of 35 and 30 µg/m3 and is soliciting public comment on these levels.

• In addition, the Agency will take comment on alternative approaches for selecting the level of the standard, and on levels as high as the current level of 65 µg/m3 and as low as 25 µg/m3.

PM2.5 – Primary Annual Standard

• EPA is proposing to retain the current **annual standard** at ***15 µg/m3***

– EPA is proposing to retain this standard based on its assessment of several expanded, re-analyzed and new studies that have increased the Agency's confidence in associations between long-term PM2.5 exposure and serious health effects, including heart and lung-related death.

• EPA is considering and is seeking public comment on lower alternatives for the annual standard including 14 and 13 µg/m3.

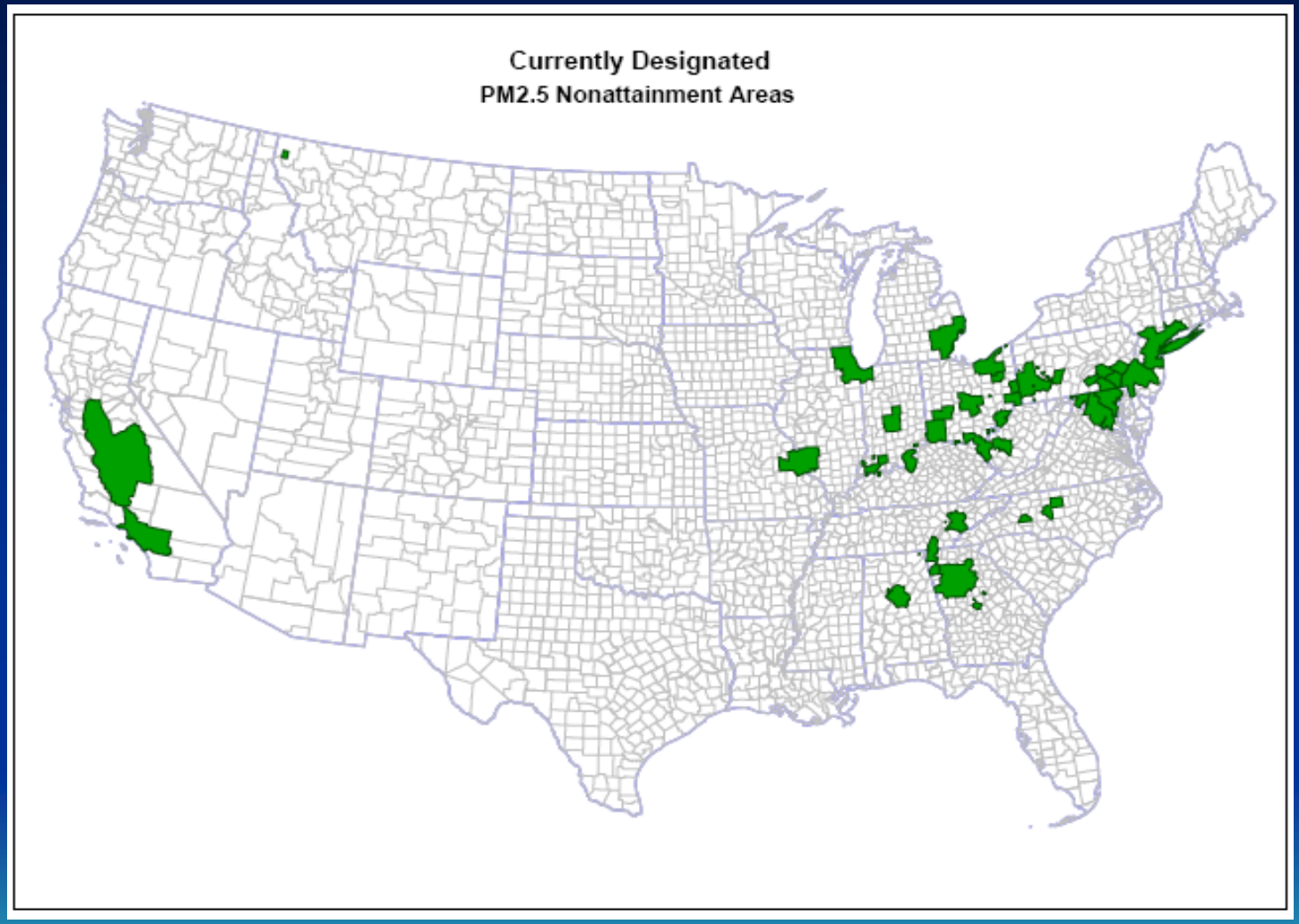
• In addition, the Agency will take comment on alternative views including a standard as low as 12 µg/m3.

PM2.5 – Secondary Standards

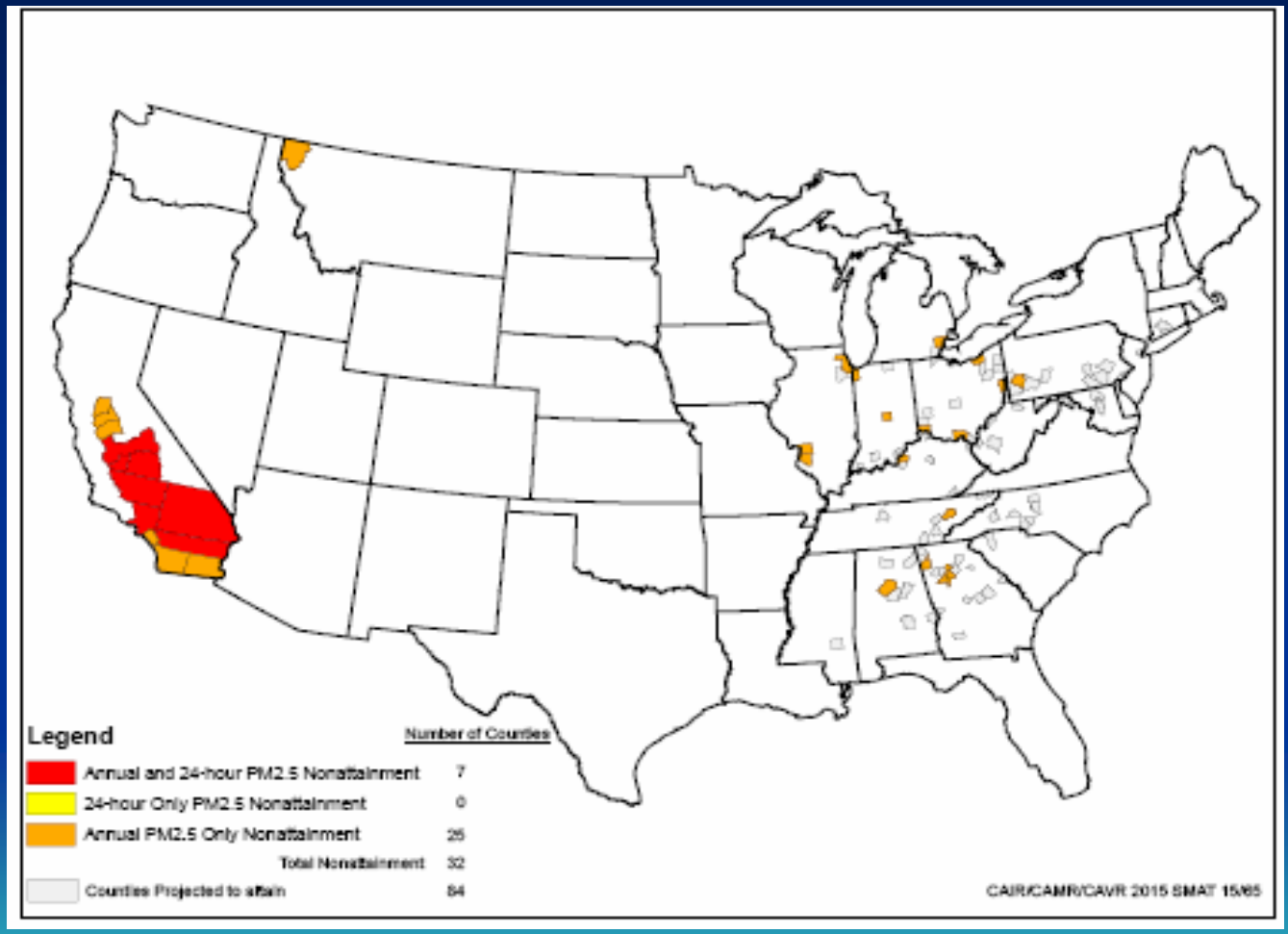
- The proposal would set the **secondary standards** for both the annual and 24-hour standards at levels identical to the primary standards
- EPA also is taking comment on whether to set a separate PM2.5 standard, designed to address visibility (principally in urban areas)
  – At levels within a range of 20 to 30 µg/m3, and
  – On averaging times within a range of four to eight daylight hours

Potential NAAQS Timelines

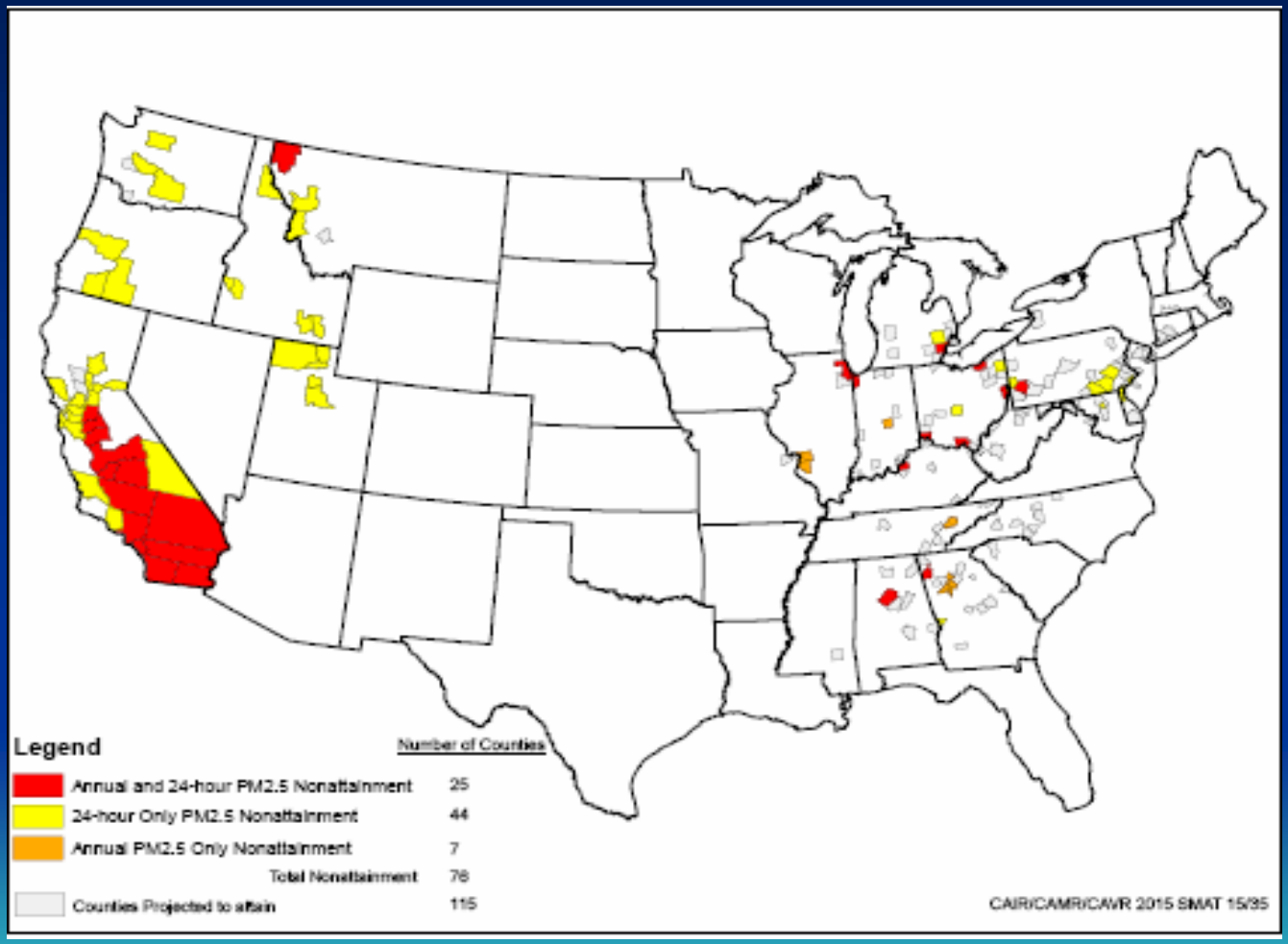
Milestone	1997 $PM_{2.5}$ Primary NAAQS	2006 $PM_{2.5}$ Primary NAAQS
Promulgation of Standard	July 1997	Dec. 2006
State Recommendations to EPA	Feb. 2004 (based on 2001-2003 monitoring data)	Dec. 2007 (based on 2004-2006 monitoring data)
Final Designations Signature	Dec. 2004	Dec. 2009
Effective Date of Designations	April 2005	April 2010
SIPs Due	April 2008	April 2013
Attainment Date	April 2010 (based on 2007-2009 monitoring data)	April 2015 (based on 2012-2104 monitoring data)
Attainment Date with Extension	Up to April 2015	April 2020


Currently Designated
PM2.5 Nonattainment Areas

Counties Projected to Exceed the PM2.5 NAAQS in 2015 Based on EPA Modeling Annual **15 ug/m3** and 24-Hour **65 ug/m3***



Counties Projected to Exceed the PM2.5 NAAQS in 2015 Based on EPA Modeling Annual **15 ug/m3** and 24-Hour **35 ug/m3***



Inhalable Coarse PM – Moving from PM10 to PM10-2.5

- EPA's current standards for coarse particles (PM10) were set in 1987.
- These standards, a 24-hour standard of 150 µg/m3, and an annual standard of 50 µg/m3, apply to particles 10 micrometers in diameter and smaller.
- The proposed revisions would change the definition of standard so that it covers only particles between 10 and 2.5 micrometers in diameter also known as PM10-2.5 or "inhalable coarse particles."

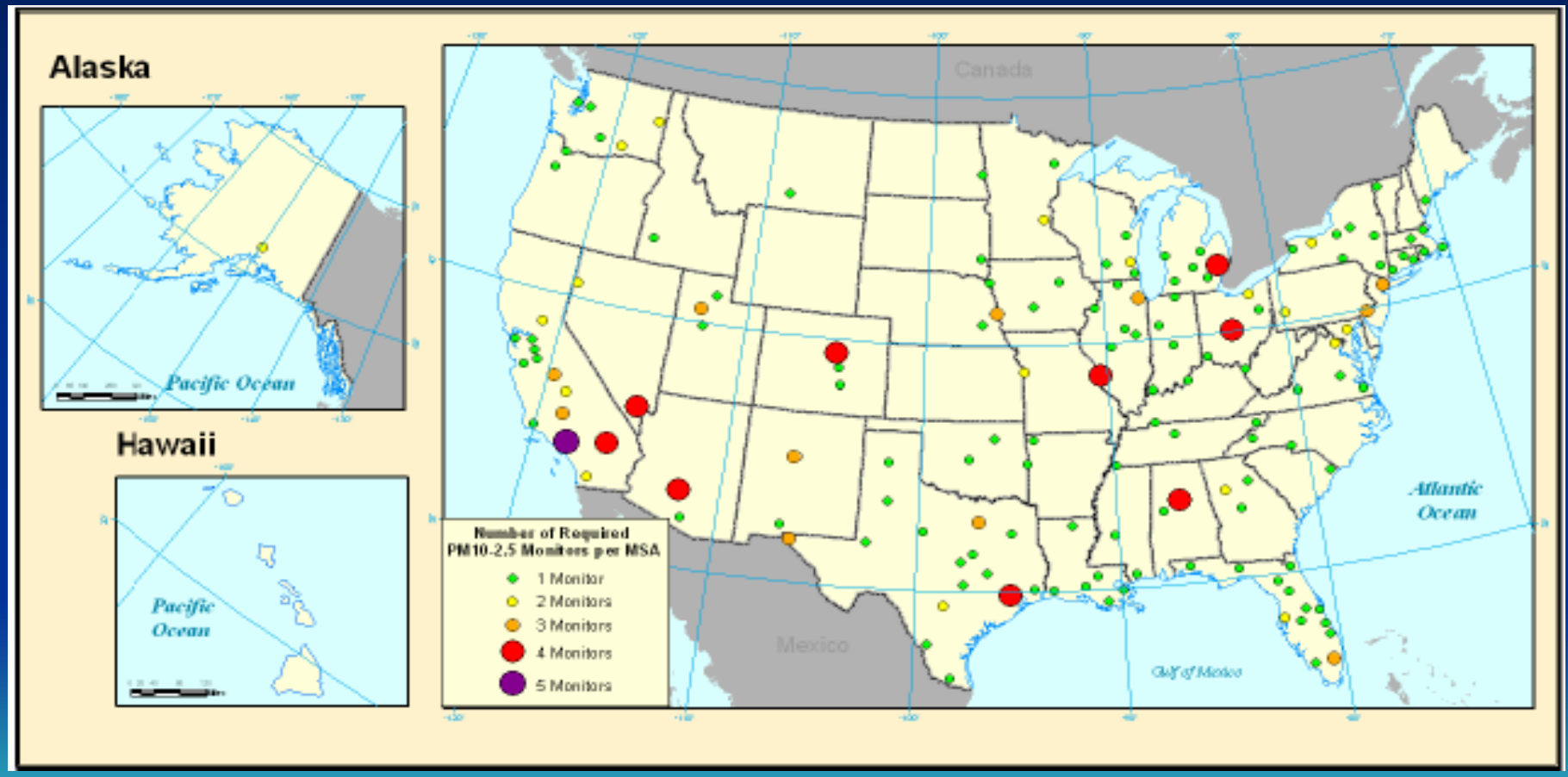
PM10-2.5 Standards

- The proposed **new PM10-2.5 standard** would be a **24-hour standard**, at 70 µg/m3.
- EPA is not proposing an annual standard for PM10-2.5.
- Under the proposal, the **secondary** 24-hour standard for PM10-2.5 would be identical to the primary standard.

Inhalable Coarse PM – Moving from PM10 to PM10-2.5

- EPA proposes to qualify coarse PM to include:
  - Any ambient mix of PM10-2.5 that is dominated by resuspended dust from high-density traffic on paved roads and PM generated by industrial sources and construction sources.
  - This definition ***excludes*** any ambient mix of PM10-2.5 that is dominated by rural windblown dust and soils and PM generated by ***agricultural*** and ***mining*** sources.
  - Agricultural sources, mining sources, and other similar sources of crustal material are not be subject to control in meeting this standard
- The indicator is not defined or limited to any specific geographic area, but includes a mix of PM10-2.5 in any location that is dominated by these sources.

Monitoring Network Design for Proposed PM10-2.5 NAAQS



Revoking the Current PM10 Standard

• EPA is proposing to revoke the **current 24-hour PM10 standard**, except in urbanized areas that have both:

1) one or more violating PM10 monitors; and

2) a population of 100,000 or more.

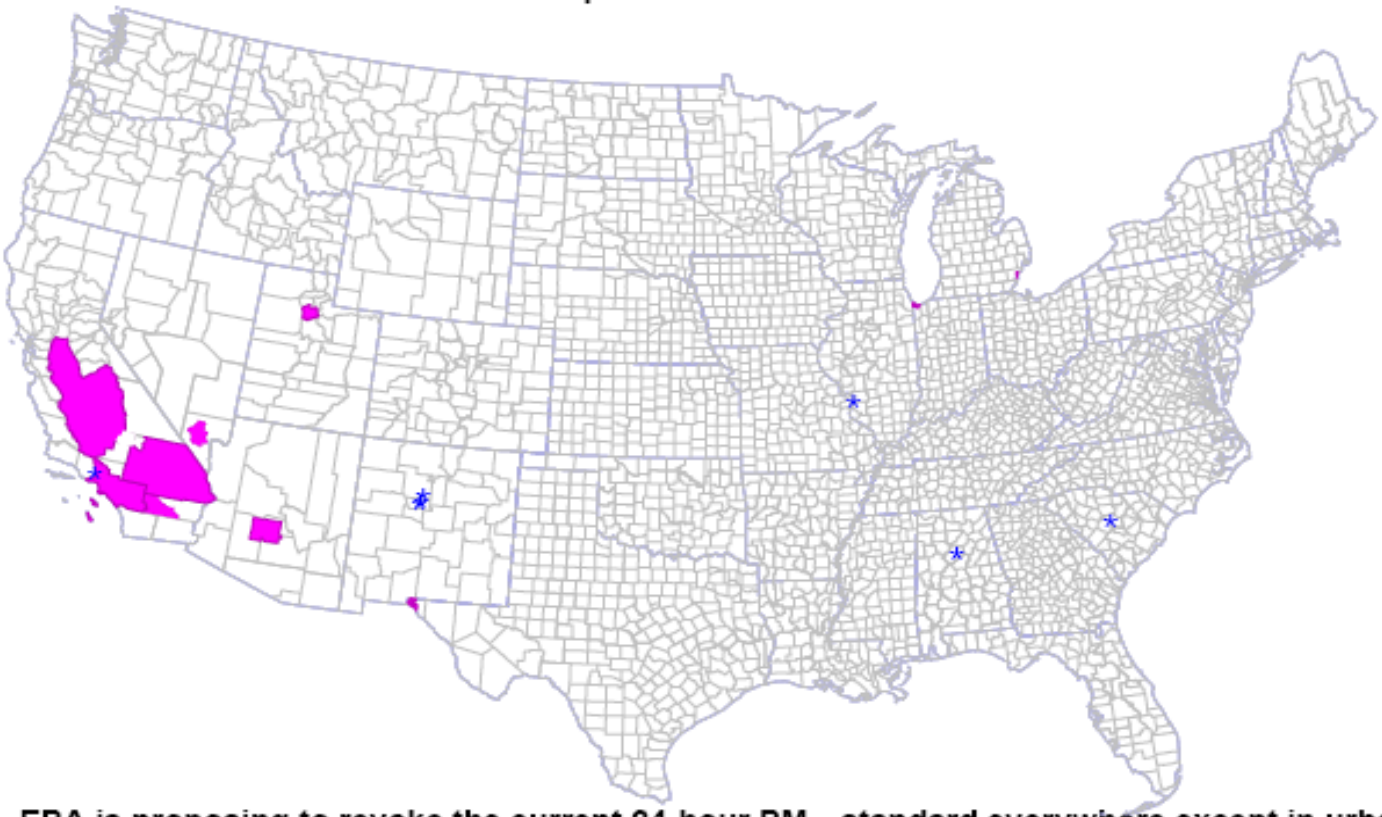
– This standard would remain in place in these areas until the Agency has completed attainment and nonattainment designations for PM10-2.5.

– EPA is taking comment on whether the 24-hour PM10 standard should be retained in areas with a population less than 100,000 but where the majority of the ambient mix of PM10-2.5 is generated by high density traffic on paved roads, industrial sources, and construction sources.

• The Agency is proposing to immediately revoke the **current annual PM10 standard** in all areas.

– Current scientific evidence does not show significant public health risks associated long-term exposure to coarse particles.

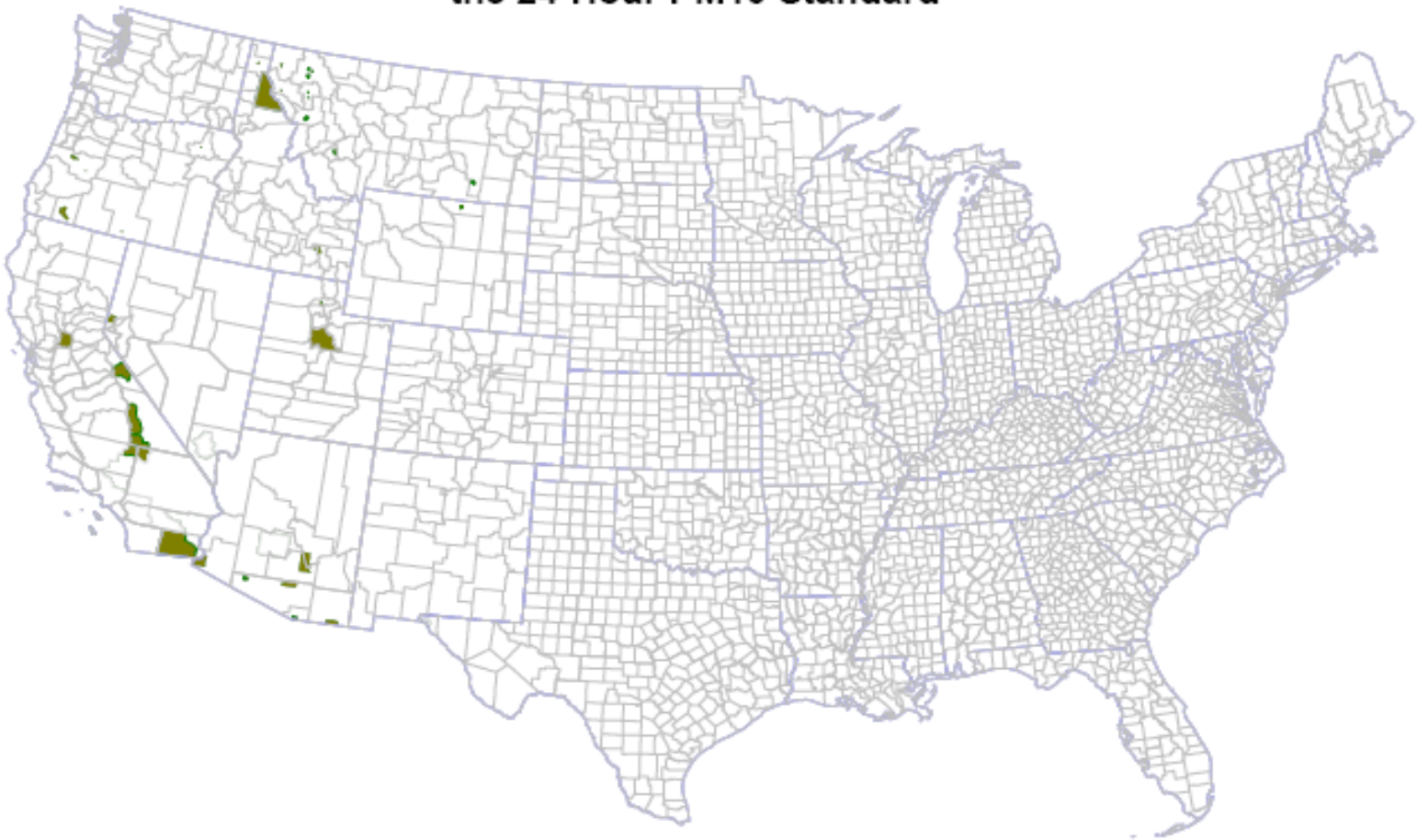
Locations where EPA Proposes to Retain the 24-Hour PM10 Standard



EPA is proposing to revoke the current 24-hour PM_{10} standard everywhere except in urbanized areas that have a minimum population of 100,000 and that contain a monitor which violates the 24-hour PM_{10} standard based on the most recent three years of data. These include:

- *Current PM_{10} Nonattainment and Maintenance Areas*
- *Other counties with violating monitors*

Current PM_{10} Nonattainment Areas where EPA Proposes to Revoke the 24-Hour PM10 Standard



Potential Timeline if PM10-2.5 Standard is Finalized

Milestone	2006 $PM_{10-2.5}$ NAAQS
Effective date of Standard	Dec. 2006
State Recommendations to EPA	July 2012 (based on 2009-2011 monitoring data)
Final Designations	May 2013
Effective Date of Designations	**July 2013**
SIPs Due	**July 2016**
Attainment Date	July 2018 (based on 2015-2017 monitoring data)
Attainment Date with Extension	**Up to July 2023**

Advanced Notice of Proposed Rulemaking:
Transition to New or Revised PM NAAQS
February 9, 2006
Comments due April 10, 2006

What issues are discussed in the ANPR?

- Proposed options for transitioning from 1997 PM2.5 NAAQS to any new 2006 PM2.5 NAAQS
- Timelines for implementation of any new 2006 PM2.5 NAAQS
- Timelines for implementation of any new PM10-2.5 NAAQS
- Transition from the PM10 standards to any new PM10-2.5 NAAQS
- What emission inventory requirements should apply to PM2.5 and PM10-2.5 NAAQS
- Next steps

www.epa.gov/air/particlepollution/actions.html